

ABSTRACT

X-ray mammography has been the standard for breast cancer screening for three decades, but offers poor statistical reliability; it also requires a radiologist for interpretation, employs ionizing radiation, and is expensive. The combination of multiple independent tests, performed effectively at the same time and co-registered, can produce substantially more reliable detection performance than that of the individual tests. The multi-sensor approach offers greatly improved reliability for detection of early breast tumors, with few false positives, and also can be designed to support machine decision, thus enabling screening by general practitioners and clinicians; it avoids ionizing radiation, and can ultimately be relatively inexpensive.